

## LARYNGITIS FROM LOCAL CAUSES.

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THE habit that prevails among the lower orders (more especially in this metropolis) of feeding their children from the spout of a tea-pot, instinctively leads such children to quench their thirst from the spout of the kettle; and thus it is that boiling water, or the steam arising therefrom, often gets into their mouths, and produces what is known as scalds of the fauces. The effects of such accidents will be best illustrated by the following cases:—

CASE I.—Anne Smith, a sturdy infant, scarcely two years of age, was brought to the surgery of St. Bartholomew's Hospital, with great dyspnœa, on the evening of October the 20th. The mother stated that it had inhaled the steam from the tube of a kettle containing boiling water, two hours previously, she felt quite confident that no water could have entered the child's mouth, as the kettle was nearly empty, and was too heavy for it to tilt. The child seemed frightened at the time, but no ill effects were noticed until more than an hour after, when it became restless, and began to "wheeze" in its breathing. On admission, the tongue, lower lip, and chin, were excoriated; the mucous lining of the mouth was congested and tumid; respiration was very laboured; at each inspiration the nostrils were dilated, the shoulders raised, and the head thrown back: the effort was accompanied with a loud wheezing sound: the skin of the lower extremities was cool, while that of the upper part of the trunk was hot and dry; pulse rapid, but not feeble. The child was very restless, and had constant cough. Two

leeches were immediately applied under the angles of the jaw, and fomentations used afterwards: the bites bled freely, and afforded much relief, so that, three hours after admission, the child was asleep, breathing in every respect more quietly. On the following day Cal. gr. j. was given, in combination with the eighth of a grain of the Tartrate of Antimony, twice in the twenty-four hours: vomiting followed its administration, and the urgency of the symptoms subsided. On the third day, on account of cough and slightly accelerated breathing, a blister was applied to the sternum with considerable advantage; and at the end of a week the child was playing about at home as well as ever.

CASE II.—A stout child, about three years old, was admitted under the care of Mr. Stanley, having just before inhaled the steam which was issuing from the spout of a kettle containing boiling water. The head was thrown backward; the features were sharp and anxious; the child was very restless, and continually directed its hands towards the pommum Adami; the respiration was hurried on admission, and soon became much more accelerated, especially at intervals, when the dyspnœa became extremely urgent, the countenance dusky, the pulse more hurried, until at last the child would sink back on the pillow with a pitiful hoarse cry, and, completely exhausted, fall asleep for a few minutes. During sleep the respiration seemed much more tranquil; but the little patient would sud-

denly start up in the greatest distress from dyspnœa. She was ordered to have leeches applied to the upper part of the sternum; Nitrate of Potash, with full nauseating doses of Wine of Ipecacuanha. The relief afforded by this treatment was most marked: the leeches did their duty, and the bleeding was encouraged by fomentations. The child was seen several times during the night, and seemed to be sleeping soundly. On the following morning the improvement witnessed in her condition was quite astonishing. She was sitting up in her bed, playing cheerfully; was rather pale, but her breathing was easy and noiseless. She recovered rapidly, and left the hospital in a few days.

Three other cases of a similar nature have fallen under my observation, in which there was every reason to believe that the inhalation of the steam was the sole cause of all the symptoms; they were counter-parts of those already related. When first seen, the respiration was rapid, laboured, and croupy, accompanied with a short sudden cough. These symptoms were immediately relieved by the application of leeches under the jaw; and the subsequent signs of bronchial inflammation in all the cases yielded to the administration of calomel and antimony, with counter-irritation over the sternum. Doubtless these cases are among the most mild forms of the affection, and, from the mode of their production, are perhaps scarcely worthy to be called "scalds of the glottis;" yet it is so impossible to divine the extent of the mischief inflicted from the commencing symptoms, that a consideration of them is important to shield the patient from the zeal of those who advocate early bronchotomy in inflammatory affections of the larynx.

CASE III.—Mary Shelley, a plump, healthy child, three years of age, was admitted into the hospital on the evening of October 2d, 1849, with extreme dyspnœa, which had followed an attempt to drink from the spout of a kettle containing boiling water, nearly three hours previously. The mother's statement was, that she had "sucked the steam" from the kettle, but she could not positively assert that no water entered her mouth. When first seen, the child's countenance was bloated and dusky;

the lips were livid, the tongue and lining of the cheeks were swollen, and there was issuing from the mouth a copious viscid secretion; the arms and thighs were cold, and the trunk of low temperature; respiration was laboured and noisy, and at each inspiration the nostrils were dilated, the head was thrown back, and the arms twitched convulsively; the pulse was very feeble; the child was very drowsy; when put to bed dozed off immediately, and seemed to breathe more quietly—with less effort. About ten minutes after there was slight spasm of the glottis, which soon subsided. A spoonful of warm milk was put into her mouth, but she was unable to swallow it. At the expiration of another ten minutes—*i. e.*, rather more than three hours after the accident—another spasm of the glottis occurred, more severe and of longer duration than the preceding one; so that, after much violent but ineffectual struggling for breath, the child sank back senseless before respiration again commenced. It was now deemed expedient to open the trachea with all speed, as the symptoms were evidently becoming more urgent, and life seemed fast ebbing. With this intention, the child was placed on a table, with a pillow to support her shoulders; but as the operation was about to be commenced she was again seized with spasm of the glottis, and after fighting wildly for breath for the space of a few seconds, she fell back exhausted and perfectly motionless. An incision, nearly an inch and a half in length, was immediately made from the cricoid cartilage to the top of the sternum, through the finely-lobular fat, and deepened by rapid strokes of the knife, until the trachea was exposed: the wound being held open with retractors, the cavity was then sponged out; and as there was scarcely any hæmorrhage, three or four rings were divided, and a long narrow cannula introduced; yet no inspiration followed. The chest was exposed, and cold water dashed against it: this produced a sudden and full inspiration; but it was obliged to be repeated at intervals for at least three minutes before the natural respiration was established. The lividity of the countenance soon disappeared, the extremities regained their natural warmth, and the child was very shortly asleep, breathing quietly, coughing only occasionally,

when the tube became loaded with mucus. In the middle of the night she had another severe fit of coughing: a spoonful of warm milk was given, but as it seemed to be coughed through the tube no more was administered: she soon slept again, and passed a quiet night.

Oct. 3rd, 6 A.M.—She had some difficulty of breathing in consequence of the tube being plugged with thick mucus: it was therefore removed and cleansed; but as respiration through the glottis was still accompanied with noise and effort, it was reintroduced. The lips and tongue were less swollen, but viscid saliva still dribbled from the mouth: she was still sleepy. Towards the afternoon, as the cough was troublesome, and there was a good deal of expectoration, three leeches were applied over the top of the sternum; their application was followed with marked benefit; the cough was relieved, and her breathing consequently was more free. On the following day, October 4, the canula was removed: her mouth had by this time regained its natural appearance, and she could swallow fluid in small quantities without difficulty. On the 6th of October (fourth day after the operation) a considerable quantity of mucus was expelled from the wound; the cough had again become troublesome: two leeches were applied to the sternum: she was able to speak. On the 11th of October (the ninth day after the operation) she had perfectly recovered her voice, and could swallow solid food. The cough, however, was frequent, and prevented the closing of the wound. A small blister was applied to the chest. The note of the 15th of October is,—The blister rose well, and has been followed by an almost entire cessation of cough: the wound is closed, though not yet cicatrized. She was discharged after a few days.

This case very closely resembles those that were first reported in the *Medico-Chirurgical Transactions* by Dr. M. Hall, and in the *Dublin Hospital Reports* by Mr. Burgess, and by itself would certainly lead to the same conclusion that those gentlemen have deduced from their cases—namely, that early bronchotomy is advisable. But it must be remembered that such cases are rare in comparison with the frequency of the milder forms of the complaint,—at least, if the experience of so large an hospital

as St. Bartholomew's is a fair test, or any evidence can be drawn from the paucity of recorded cases: so that we must be careful, in framing the guiding principles of our treatment, to analyse the materials at hand, lest in avoiding severe measures we fall into the opposite extreme, and, as some have done, treat an important subject slightly.

Akin to the cases now under our consideration—indeed they almost belong to the same category—are laryngeal obstructions produced by the local action of corrosive and irritating fluids: and before drawing your attention to some points of treatment, I think the narration of the following case will be found interesting, and applicable to our present subject; for the particulars of which, though the patient was under my close observation, I am indebted to my friend Mr. Wood.

CASE IV.—William Henry Shirwell, two years of age, a plump child, by no means of delicate appearance, was playing, on Feb. 26, 1850, about five o'clock in the evening, with a ginger-beer bottle which contained sulphuric acid. Having removed the cork, he attempted to drink, but was immediately seized with vomiting, and began to cough violently. The retching continued for about two hours, and about ten o'clock P.M. he was observed to breathe very quickly, and with a harsh, croupy sound: he slept, however, at intervals, and was brought to the hospital on the following morning, Feb. 27, at half-past ten o'clock. At that time the child's respirations were upwards of sixty in the minute, accompanied with a harsh, hoarse, ringing sound with the inspiration: there was constant cough, and loss of voice, the attempt at crying giving rise to a rough, barking kind of noise; there was most urgent dyspnoea; the face, lips, and ears were livid,—in fact, were almost blue; the depressions above the clavicles at each inspiration were considerable; there was constant desire to sleep; the skin of the trunk and upper extremities was hot and dry, with the exception of the faec, which was covered with perspiration, while that of the lower extremities was cold. The child had swallowed some liquid soon after drinking the vitriol; but at the time of admission he refused to drink. Three leeches were applied to the front of the chest, and an emetic forced down his



throat, which acted, but merely emptied his stomach. One grain of calomel was ordered to be given every second hour. In the evening his condition was much the same; was still drowsy; respiration 79; dyspnœa urgent; pulse small. Throughout the following day, Feb. 28, he remained in much the same condition, except that his respiration was rather less noisy. On the third day, March 1st, the breathing was very difficult; respiration 70; was able to swallow some milk. In consequence of the absence of improvement, and the gradually increasing orthopnœa, the leeches were repeated, and another emetic of Ipecacuanba Wine administered, but without benefit: he was ordered to continue the powder every fourth hour, the previous calomel having produced mucous evacuations.

March 2d.—Sleeping heavily, and breathing quickly (65) and laboriously; coughing occasionally. Two more leeches were applied.

3d.—As his breathing was still hurried and laborious, some blistering fluid was painted over the top of the sternum: this by the evening had vesicated freely: he then seemed to be greatly relieved; his breathing was much more free, and almost without noise. From this time he gradually lost all his symptoms, and recovered speedily without interruption.

It is important to remark, that so urgent were the symptoms on his admission, that tracheotomy was considered inevitable; and, indeed, for the first twelve hours little hope was entertained of his recovering without its aid.

Doubtless in their treatment and in many of their symptoms these cases very closely resemble croup; but the cause and seat of the mischief, and the condition of the patient,—namely, his freedom from the depressing influence of inherent disease,—render them much more under control, although, without some active interference, their termination will be as surely and more rapidly fatal. Of the first four cases\* that were published, three died; the fourth “recovered from imminent suffocation after violent screaming;” and in the record of this last case Dr. Hall remarks,—“The parents of this child *suppose* that the violence of the screaming ruptured the vesicles by which the breathing was

impeded, and thus proved an unexpected means of cure:” but we must not forget that “this little patient was bled from the jugular vein;” whereas the only treatment mentioned in the other cases is a mixture of oil and mucilage, and the unsuccessful performance in one of them of tracheotomy. Mr. Burgess\* has reported two cases in which he performed tracheotomy without any previous treatment; the one recovered, while the other is reported to have died from neglect of the attendants. With such experience, who can wonder that these gentlemen should recommend “early bronchotomy in such cases?” But, happily, later experience and more extended observation have taught us to consider these accidents more calmly, and not employ the severe remedy of surgical interference without testing the benefit of other means, although it demands that we should be ready to do so at a moment’s notice. Mr. Wallace† seems to have been among the first to maintain the practicability of treating these affections; and his propositions have been supported, with slight modifications, by Messrs. Porter, Ryland, and other subsequent writers. So well, indeed, have his opinions been seconded, that we find one of the most experienced of our surgeons,‡ while allowing that “the mildest cases are of a fearful nature,” asserting that, “by the application of a leech or two, according to the age, and the administration of calomel and antimony, in most of the cases the symptoms have subsided in twenty-four hours; often the breathing has become free immediately after the application of the leeches.” This statement is certainly borne out by most of the cases that have fallen under my notice; and it is an interesting fact, that, with very rare exceptions, so far as my search has extended, wheresoever tracheotomy is recorded to have been performed in these accidents, it has not been preceded by either local or general depletion; so that it gives rise to a question whether such operations might not have been often avoided had some such treatment been previously adopted, more especially

\* Dublin Hospital Reports, vol. iii. p. 380.

† Clinical Lecture published in *Lancet*, 1833-4, Part 1.

‡ Vincent, *Surg. Pract.* p. 246.

since Mr. Porter, in his work\*, remarks:—"I scarcely recollect a case, even where bronchotomy afterwards became necessary, in which the application of leeches to the throat in the early stages was not followed by a marked, though it might be only a temporary relief; and many cases have occurred in which a perseverance in such a line of practice has been attended with success as decided as it was unexpected." In the third case related above, although the child was apparently dying when admitted, I am inclined to think that the chance that leeches would afford should not have been thrown away: they might have been applied while the instruments were being arranged; and, if placed close under the angles of the jaw, would not have impeded the operation, should it then have become necessary. Again, with regard to the operation of tracheotomy, as has been already stated, we must not regard the laryngitis from accident in the same light as that from

disease: in the one the malady is purely local, only secondarily affecting the constitution; while the other is an evidence, or I might say a consequence, of a previously disordered system. In the former, time will cure; and, as the vital powers remain strong to the last, operation need not be hastily resorted to: in the latter, however, the prostration that accompanies the affection imperatively demands that operation should not be long delayed, if any benefit is to be expected from its employment.

It would be needless to discuss the advantages of the various modes of treatment that have been proposed,—whether the calomel plan proposed by Mr. Wallace excels the emetic or sudorific systems of others; suffice it to say that all are agreed as to the propriety of early leeching, and the advantage of counter-irritation over the sternum in the later stages; and, in the cases I have now related, these measures were highly effective, and seem to be of most importance.

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\* Surgical Pathology, Larynx and Trachea, p. 184.

